



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,092	02/28/2002	John F. Arackaparambil	4066 D1/Consilium/MBE	8287
32588	7590	10/17/2005		
APPLIED MATERIALS, INC. 2881 SCOTT BLVD. M/S 2061 SANTA CLARA, CA 95050				
			EXAMINER GARLAND, STEVEN R	
			ART UNIT 2125	PAPER NUMBER

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,092

Applicant(s)

ARACKAPARAMBIL ET AL.

Examiner

Steven R. Garland

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on see office action.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24,28-34,48-55 and 66-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-24,28-34,48-55,66-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>see action</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 13-24, 28-34, 48-55, and 66-69 are pending. Claims 1-12, 25-27, 35-47, and 56-65 have been canceled.
2. This action is responsive to the papers filed 9/7/05; 12/7/04; 10/8/04; 8/11/04; 3/29/04; 12/18/03; 10/9/03; 7/3/03; 4/25/03; 12/31/02; 9/19/02; 7/31/02; 4/18/02; and 2/28/02.
3. The information disclosure statement(s) submitted 9/7/05; 12/7/04; 10/8/04; 8/11/04; 3/29/04; 12/18/03; 10/9/03; 7/3/03; 4/25/03; 12/31/02; 9/19/02; and 7/31/02 have been considered to the extent indicated. It is noted that over 30 pages of information disclosure statements have been submitted by applicant.
4. In regards to the documents not considered on the IDS filed 12/18/03 the documents not considered lacked any publication date.
5. In regards to the IDS filed 4/25/03 the foreign patent documents and non patent literature were not considered, since no copies were provided. The documents which were not considered have been crossed out.
6. The disclosure is objected to because of the following informalities: the status of the parent application should be updated. In the specification both the terms FALC and FALL are used for factory automation lifecycle 200, consistent terminology should be used to avoid confusion. Note page 14, lines 9-11 and page 15, lines 14-15, for example.

Appropriate correction is required.

7. 35 U.S.C. 101 reads as follows:

Art Unit: 2125

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 50-55 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 50-55 are all directed to a nonstatutory descriptive material in the form of a data structure. The claimed data structures do not define any structural or functional interrelationships between the data structure and other aspects of the invention which permit the data structure's functionality to be realized and as such are non-statutory.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 13-24, 28-34, 48-55, and 66-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over SEMI Draft Doc. 2817 New Standard: Provisional

Art Unit: 2125

Specification for CIM Framework Domain Architecture (cited by applicant and with copy provided in parent application) in view of Tan et al. 6,263,255 (cited by applicant).

SEMI Draft Doc. 2817 New Standard: Provisional Specification for CIM Framework Domain Architecture (cited by applicant and with copy provided in parent application) hereafter referred to as the Document.

The Document teaches computer integrated manufacturing CIM and use of a framework of software for semiconductor factory modeling (page 1, purpose section paragraph). The Document further teaches that the software framework uses various software components such as the factory operations component on page 21 which in turn manages various other applications and that the components can communicate necessary information. This factory operations component manages various other application components (page 22, lines 1-3) such as the Process machine component, Material Transport component, Scheduling (calendar) component, Tracking and Maintenance (monitoring) component, recipe management component (page 25), etc. The Document further teaches that the instructions to the various components vary depending on whether changes have occurred or not (instructions are not modified). The changes can take various forms such as a new order, schedule change, equipment status, APC recommended adjustments (see pages 21-25, note page 25 section 7.1.11). The changes in turn cause modifications to instructions to occur. The Document further teaches the use of a component to interface to a tool in the form process machine component which can serve as a tool integration component (page 24). The various software components are each made up of software building blocks

assembled to make the overall component for example the scheduling component is inherently formed from schedule building blocks. See pages 15-28, 51, and 52.

The Document however does not provide a physical implementation of the system or actually run the software.

Tan et al. teaches a physical system to implement an advanced process control APC system having a software framework for semiconductor processing, use of a processing machines 208; use of a computer (col. 1, lines 5-10), interfacing including a visual graphic interface component (col. 7, lines 5-15) as well as a machine interface and use of a data memory (databases and data storage).

Further Tan teaches computer implemented factory automation (col. 1, lines 5-10) including defining, installing, and administrating activity framework components; modeling components; use of interface, registry, controlling, monitoring , and tracking components (figs. 6,7 and their description). Tan also teaches plug and play components; creation and deletion of components; use of a history; control of semiconductor IC manufacturing; use of both user and tool interfaces; use of databases and data structures; storing the software on a computer readable medium; context resolution; data analysis; use of a data manager; defining interactions between components; updating software; planning; and use of processing equipment and computers. Tan also teaches automatically developing using iteration and the use of a manufacturing execution system. See the abstract; figures; col. 2, line 58 to col. 3, line 48; col. 5, lines 15-67; col. 6, line 51 to col. 8, line 35; col. 9, lines 1-26; col. 11, lines 1-

Art Unit: 2125


45; col. 12, lines 18-67; col. 13, lines 1-63; col. 14, lines 43-57; col. 15, line 19 to col. 16, line 17; col. 29, lines 58-64; and the claims.

It would have been obvious to one of ordinary skill in the art to modify implementation of the system and framework taught by the Document by the system of Tan. This would allow implementing an actual physical system conforming to the CIM standard and yet allow the system to be easily updated, provide improved APC control, and increase adaptability.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R. Garland whose telephone number is 571-272-3741. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

SRG
Steven R Garland
Examiner
Art Unit 2125